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# PROCEDURES for CONDUCTING PLANT MATERIALS WORK in CALIFORNIA



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**U. S. DEPARTMENT of AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

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## PROCEDURES FOR CONDUCTING PLANT MATERIALS WORK (WESTERN STATES)

### Section I

#### NURSERIES

The Soil Conservation Service operates its nursery facilities for the purpose of producing planting materials for use in the administration of its programs. In addition to the collection, propagation, and distribution of suitable planting materials, and the development of methods and field practices to facilitate such activities, other related work includes the assembly, observation, establishment, and utilization of superior plants for soil conservation work. These activities are closely coordinated on the nurseries, and their application to the field program is provided through close collaboration with technicians of the Service. The State of California, through the State Soil Conservation Commission of the Department of Natural Resources, is cooperating in the Program at the Pleasanton Nursery only, under a special agreement for nursery and production work in and for California on a matching fund basis.

#### FUNCTIONS OF THE NURSERIES

1. To develop programs for nursery operations in cooperation with the Plant Materials Specialist, and the Washington-Field Plant Materials Technician and submit them to the State Conservationists for approval. These programs will be cleared with cooperating agricultural experiment stations.
2. To develop annual work plans within the limits of approved programs and submit them to the State Conservationists for concurrence. Copies will be sent to the Washington-Field Plant Materials Technician.
3. Determine needs for nursery operations based on approved programs and work plans and present these needs to the State Conservationists.
4. Carry out operations as reflected in approved programs and plans with the personnel, funds, and facilities provided.
5. Develop standards of performance and establish checks and controls for nursery operations to assure that the required standards are met.
6. Provide opportunity for personnel training and advancement.
7. Maintain cooperative relationships.
8. Analyze and report accomplishments as required.





## FUNCTIONS OF THE PLANT MATERIALS SPECIALIST

1. To determine the needs for new or better plant materials and cultural practices in soil conservation districts as presented by Service personnel through the program planning staff of the State Conservationists.
2. To recommend trials at Service nurseries or cooperating nurseries to meet the needs for new materials and cultural practices as determined under item 1 and to consult with research agencies, particularly state experiment stations, regarding the needs for plant materials and improved cultural practices.
3. To develop with the Nursery Manager a program for testing new plants and new cultural methods on farms in soil conservation districts within the limits of policies established for such work, to correlate this program with Service specialists in related subject matter fields and with agricultural experiment stations, and to submit the program to the State Conservationists for concurrence. Copies of the approved program will be supplied to the Washington-Field Plant Materials Technician, state experiment stations, and State Conservationists.
4. To develop annual work plans for conducting field-scale planting trials within the limits of approved programs and submit them to the State Conservationists in the area he serves for approval.
5. To carry out the annual work plans for field-scale planting trials with the assistance of the Nursery Staff by providing on-site assistance in the selection of testing sites, making plantings, periodic inspections, evaluations--including appropriate measurements, reporting results, and correlating progress with Service technicians and state experiment stations.
6. To assist growers in soil conservation districts with the production of new plant materials. This assistance includes implementation of the release of new species and plants of proved conservation value by state experiment stations through the crop improvement associations; providing information on sources of foundation stocks, methods for growing, managing, harvesting, processing, and certifying stock; and on-site assistance in selecting fields and in growing and managing the crop.
7. To develop and maintain a list of vendors and producers of plant materials needed in conservation work.
8. To collect seeds and plants from native and naturalized stands that have potentials for use in conservation programs and arrange with Service nurseries, cooperating nurseries, and state experiment stations for testing them under controlled conditions.
9. To assist State Conservationists and their staffs in conducting training programs and/or technical conferences for field technicians.



## FUNCTIONS OF THE PLANT MATERIALS SPECIALIST

10. To maintain cooperative relationships with State, Federal, and private research agencies, seed companies, fertilizer companies, nurserymen, crop improvement associations, state regulatory services, Service technicians, and others in obtaining, testing, and producing plant materials.
11. To represent the Service in the area served in dealing with the public on matters pertaining to the use of plant materials in conservation work.

## FUNCTIONS OF THE WASHINGTON-FIELD PLANT MATERIALS TECHNICIAN

1. To develop, coordinate, and furnish guidance to a program for supplying plant materials for programs of soil and water conservation in the Western States, Alaska, and Hawaii.
2. To develop, with Service specialists, an inventory of the needs for plant materials and cultural techniques for the effective
3. To develop an inventory of sources of plant materials needed in the soil and water conservation programs.
4. To keep currently informed of the development of new materials and cultural methods and recommend their use in the soil and water conservation programs.
5. To arrange for and coordinate a testing program for new or improved plant materials and cultural methods in Service nurseries, cooperating nurseries, and state or other experiment stations.
6. To assist in developing programs and work plans for field-scale planting trials on farms in soil conservation districts using promising plant materials and new cultural techniques.
7. To evaluate reports of field-scale planting trials and trials on Service and cooperating nurseries and recommend the release of new plant materials for general use in the soil and water conservation programs.
8. To assist in developing programs and work plans for the increase of new and improved plant materials in soil conservation districts and by commercial companies and to coordinate such programs among states.
9. To correlate plant materials work with other Plant Technology Specialists and Engineering and Watershed Planning Unit Specialists and integrate the work into a coordinated soil and water conservation program.
10. To collaborate with State Conservationists in working with state experiment stations and other agencies with an interest in the plant materials program.



## FUNCTIONS OF THE WASHINGTON-FIELD PLANT MATERIALS TECHNICIAN (Continued)

11. To assist in the training of Plant materials Specialists and Nursery technicians.
12. To represent the Service on committees dealing with introduction, testing, and production of plant materials.

### FIELD-SIZE PLANTING TRIALS

I. Policy. Field-size planting trials will be made on farms in soil conservation districts as final tests and demonstrations of cooperative work of the nurseries. Such improvements to conservation practices are the result of:

1. Assembling and testing a large number of species, varieties and strains of grasses, legumes, shrubs, and trees for their possible use in conservation work.
2. Organized studies on adaptation, culture, production, and management carried out in cooperation with state experiment stations and other departmental bureaus with the collaboration of the technicians of the Service.

A new species, strain, or cultural method will be scheduled for field-size planting trials only after evidence is available that it is probably superior to the standards referenced in the current technical guides. Field-size planting trials will be programmed, planned, and reported on by the Plant Materials Specialist and the Nursery staff. For the purpose of evaluation, a coordinated follow-up and control of plantings will be maintained. Periodic inspections and reports on these plantings will be made. No new species or strain will be released from the trial program for general use (recommended in technical guides) until such release has been officially cleared.

II. Program. A program for field-size planting trials will be developed by the Plant Materials Specialists and the Nursery Managers for the area they serve. It will be submitted to State Conservationists through the Washington-Field Plant Materials Technician for approval. It will be cleared with official cooperators. The program will describe the kinds of plantings that will be put on farms in soil conservation districts to compare new plants or practices with those in the technical guides. If changes in the program are needed, the Plant Materials Specialist will submit amendments.

III. Yearly Work Plan. The Plant Materials Specialist, with assistance of the Nursery staff, will develop a yearly work plan based on the approved program. The yearly work plan will comprise a work schedule. Specific information for each species, strain, or cultural method featured will be furnished to support the work schedule. The specific information will include, as a minimum, answers to the following questions:





## FIELD-SIZE PLANTING TRIALS (Continued)

1. What is being featured?
2. What standard species, strain, or practice referenced in the technical guide is it designed to improve?
3. Where is it being scheduled for trial?
4. What cultural practices are recommended as a minimum requirement for effective field-size trials?

The Plant Materials Specialist will develop the yearly work plan with the assistance of the State Program Planning Staff and the Nursery Manager. Yearly work plans will be submitted to the Washington-Field Plant Materials Technician for concurrence by November 15 each year. A preliminary estimate of the planting materials needed in the plan must be submitted by the preceding January 15 and brought up to date by August 1.

- IV. Operations. A planting plan for each field-size trial scheduled in the yearly work plan will be made by the Work Unit or Area Conservationists or jointly with the Plant Materials Specialist. Planting plans will be developed in three copies (see attached Form). They will be developed with the farmer and may be made a part of his farm plan. Signed plans will be submitted by the Area Conservationist to the Plant Materials Specialist. Two copies will be returned to the Area Conservationist after signature by the Plant Materials Specialist. One of these is for the Work Unit Conservationist. A completed plan will encumber planting materials to be furnished by the Nursery for the trial. The Plant Materials Specialist will keep an active file on every planting.
- V. Reporting results. The Plant Materials Specialist will maintain a coordinated control and follow-up on each field-size planting trial. The information will be accumulated and filed by trial for reference and interpretation. Every trial will be examined at least once a year and rated comparatively on Form "Report of Field-Size Planting Trial."

## PROCEDURE FOR PRODUCTION OF SEED AND PLANTS IN SOIL CONSERVATION DISTRICTS

- I. Policy. The Soil Conservation Service is cooperating with the State experiment stations and other bureaus of the Department of Agriculture in developing plant materials suitable for conservation plantings and in making initial increases of these materials. Planting supplies are limited, and, in order to be assured of their proper handling and to lead to a more general use of these materials, the Service will make planting materials available to soil conservation districts for increase purposes under the following provisions:

### A. Responsibilities to be assumed by district directors:

1. Select the species to be increased from a list recommended by the Soil Conservation Service.





PROCEDURE FOR PRODUCTION OF SEED AND PLANTS IN SOIL CONSERVATION DISTRICTS  
(Continued)

2. Help select and approve district producers of these materials on the basis of their abilities, facilities, and interest in producing high quality products.  
(The number of district producers and the acreage assigned to each should be determined on the basis of conservation needs and the amount of planting materials available.)
3. Furnish the planting materials provided by the Soil Conservation Service to growers.
4. Develop an agreement with the producers. This agreement may be made a part of the Farm Conservation Plan or it may be in the form of an exchange of letters between the district and the producer. It is suggested that the following items be considered when making the agreement:
  - a. Obtaining a part of the crop by the district for resale to other farmers in the district for conservation use.
  - b. When, how, and where seed is to be cleaned and processed.
  - c. How optioned seed will be made available to district cooperators.
  - d. Period covered by the agreement (i.e., the agreement may continue in force during the productive life of the original planting but not to exceed 5 years).
  - e. Risks in production. These should be assumed by the producer.

B. Responsibilities to be assumed by the Soil Conservation Service

1. Give technical assistance in applying recommended cultural practices. District growers will be encouraged to become members of the Crop Improvement Association and to produce certified seed.
2. The Plant Materials Specialist will assemble information on (1) species, (2) growers, (3) districts, (4) acres, and (5) amount of planting materials furnished, and he will submit it to the Washington-Field Plant Materials Technician and the State Conservationist by August 15 each year. The Plant Materials Specialist will inform state experiment stations and Crop Improvement Associations of these activities.



PROCEDURE FOR PRODUCTION OF SEED AND PLANTS IN SOIL CONSERVATION DISTRICTS  
(Continued)

3. Correlate distribution of seed for farmer-district production with the Crop Improvement Association and the State Experiment Station to help prevent duplication in distribution of foundation seed. The Plant Materials Specialist will be responsible for this correlation.

C. Limitations.

1. In the case of seeds the maximum amount furnished to a grower will not exceed 100 pounds or enough to seed 10 acres, whichever is the greater. For vegetative materials the amount furnished will not exceed that needed for one acre. Exceptional cases must have clearance from the State Conservationist.
2. Only one species to each grower will generally be the basis of allotment. Exceptional cases must have clearance from the State Conservationist.
3. Foundation seed of perennial species will not be furnished to the same grower for more than 2 years in succession.

II. Program. A program for district production of seed and plants will be developed by Plant Materials Specialists for the area they serve. The program will be for a 5-year period but may be amended. It will be approved by the State Conservationists. The Plant Materials Specialists will correlate the program with cooperators. The program will include a list of species and accessions, their conservation uses, and a statement of why they are included.

III. Yearly Work Plan. Plant Materials Specialists, with the help of the Nursery Managers, will develop an annual work plan based on the approved program. The annual work plan will include the species, accessions, and location of proposed plantings by districts. It must be cleared with the State Conservationists from the standpoint of work load in the work units involved. The due date will be August 15 of each year.

IV. Instructions for developing planting plans. A planting plan for each farmer-district production planting will be made on Form "Plan for District Increased Planting" (attached) with the farmer and submitted to the district governing body. Approval by the district governing body assumes that the policy discussed under I above has been adequately reviewed and that the proposed planting is in accordance with it. Three copies of the approved plan will be submitted by the Area Conservationist to the Plant Materials Specialist for his approval. Two of these will be returned. The completed and approved forms represent the initiation of a plan and are used to encumber planting materials to be furnished by the Nursery. The Work Unit Conservationist will notify the Nursery Manager when the seed is needed. Any variations from the original plans will be recorded.



PROCEDURE FOR PRODUCTION OF SEED AND PLANTS IN SOIL CONSERVATION DISTRICTS  
(Continued)

- V. Correlation with experiment stations and other bureaus. Plant Materials Specialists will obtain production records from the district seed fields and will make a summary to be included in the Annual Operations Report. This summary will be used by the Plant Materials Specialists for the purpose of correlation with cooperating experiment stations and other bureaus.



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UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

REPORT OF FIELD-SIZE PLANTING TRIAL

Trial No. \_\_\_\_\_

REFERENCE INFORMATION

Featured species, strain, or practice \_\_\_\_\_

\_\_\_\_\_ Acc. No. P- \_\_\_\_\_

Standard species, strain, or practice \_\_\_\_\_

Soil Conservation District \_\_\_\_\_  
(Name) (Number)

Cooperator \_\_\_\_\_  
(Name) (Address)

Date seeded or planted \_\_\_\_\_

Location of planting \_\_\_\_\_

FIELD RECORD OF INSPECTION

Comparison with standard species: Superior Same Inferior Not Rated

Stand

Vigor

Erosion control

Production

Comment on the following: Limiting factors; management, cultural practices;  
use, cooperator's opinion; etc.

Describe photographs taken:

Inspected by \_\_\_\_\_  
(Names)

Date of Inspection \_\_\_\_\_





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Rev. (9/22/54)

UNITED STATES DEPARTMENT OF AGRICULTURE  
Soil Conservation Service

PLANTING PLAN FOR FIELD-SIZE PLANTING TRIAL

Trial No. \_\_\_\_\_

Featured species, strain, or practice \_\_\_\_\_

Acc. No. P- \_\_\_\_\_

Soil Conservation District \_\_\_\_\_  
(Name) (Number)

Cooperator \_\_\_\_\_  
(Name) (Address)

Agreement No. \_\_\_\_\_ Field No. \_\_\_\_\_ Acres \_\_\_\_\_

| Trial mixture              |                  | Total needed | Supplied  |
|----------------------------|------------------|--------------|-----------|
| <u>Species or practice</u> | <u>Acre rate</u> | <u>gross</u> | <u>by</u> |

| Standard mixture           |                  |
|----------------------------|------------------|
| <u>Species or practice</u> | <u>Acre rate</u> |
| <u>(for comparison)</u>    |                  |

Site: Soil \_\_\_\_\_ LUC \_\_\_\_\_ Slope \_\_\_\_\_

Exposure \_\_\_\_\_ Precipitation \_\_\_\_\_ in. Elevation \_\_\_\_\_ ft.

Field history for past 3 years: 19\_\_\_\_, \_\_\_\_\_  
(Sketch farm and field 19\_\_\_\_, \_\_\_\_\_  
location on reverse side) 19\_\_\_\_, \_\_\_\_\_

Planned seedbed conditions: \_\_\_\_\_

Irrigation \_\_\_\_\_ Seasonal availability \_\_\_\_\_ Acre ft. for field \_\_\_\_\_  
Yes or No

Method of Planting \_\_\_\_\_ Date to be planted \_\_\_\_\_

Purpose or use of this trial: \_\_\_\_\_

Data to be taken: \_\_\_\_\_

Cooperator \_\_\_\_\_  
(Signature) (Date)

Submitted by \_\_\_\_\_ Date \_\_\_\_\_  
(Area Conservationist)

\_\_\_\_\_ Date \_\_\_\_\_  
(Plant Materials Specialist)



UNITED STATES DEPARTMENT OF AGRICULTURE  
Soil Conservation Service

PLAN FOR DISTRICT INCREASE PLANTING

File No. \_\_\_\_\_

SPECIES \_\_\_\_\_ ACC. NO. \_\_\_\_\_

GROWER (Name and Address) \_\_\_\_\_

S.C. DISTRICT (Name and Number) \_\_\_\_\_

ACRES PLANNED \_\_\_\_\_ AMOUNT OF MATERIAL NEEDED FROM NURSERY \_\_\_\_\_

Farm Plan No. \_\_\_\_\_ Field No. \_\_\_\_\_ Site: Soil type \_\_\_\_\_ LUC class \_\_\_\_\_

Precipitation \_\_\_\_\_ ins. Irrigation or Dryland. Elevation \_\_\_\_\_ ft.

GROWER'S experience with similar types of production: \_\_\_\_\_

Equipment (yes or no): Seeding \_\_\_\_\_; Cultivating \_\_\_\_\_; Harvesting \_\_\_\_\_

Where will seed be cleaned? \_\_\_\_\_

CULTURE: Give crop history by years of field for the past 5 years.

Seedbed preparation planned: \_\_\_\_\_

Seeding method (drilling, broadcast, row spacing): \_\_\_\_\_

Seeding date: \_\_\_\_\_ Seeding rate: \_\_\_\_\_

Fertilizer (Kind, Method, Date, and Rate of Application): \_\_\_\_\_

WEEDS: What noxious or other weeds are present? \_\_\_\_\_

What methods of control are to be used: cultivation, selective sprays, hand? \_\_\_\_\_

Expected yields by years: \_\_\_\_\_

Have District Supervisors approved farmer for District seed production? \_\_\_\_\_

GROWER \_\_\_\_\_ Date \_\_\_\_\_  
(Signature)

SUBMITTED BY \_\_\_\_\_ Date \_\_\_\_\_

APPROVED BY \_\_\_\_\_ Date \_\_\_\_\_  
(District Conservationist)

\_\_\_\_\_ Date \_\_\_\_\_  
(Nursery Manager)



## Section II



PROCEDURES FOR CONDUCTING PLANT MATERIALS WORK  
(WESTERN STATES)

Section II

PRODUCTION AND COLLECTION OF PLANTING MATERIALS

QUOTAS AND REQUESTS

Quotas will be assigned by the Washington-Field Plant Materials Technician or they will be arrived at through the development and approval of production and rotation programs and plans. Quotas will be based on approved requests exemplified as follows:

1. From State or Territorial Conservationists:
  - a. For use by Plant Materials Specialists for:
    - (1) Field-size planting trials.
    - (2) Farmer-district production of seed.
  - b. For special materials for specific and justified uses, such as requirements of Engineering and Watershed Planning Units.
2. From official cooperators arranged through cooperative agreements developed by the State Conservationist with:
  - a. State game departments.
  - b. Federal-State tree nurseries.
3. From other Federal agencies through special arrangements provided by the Washington-Field Plant Materials Technician and the State Conservationist:
  - a. Agricultural Research Service.
  - b. Forest Service.
  - c. U. S. Engineer
  - d. Bureau of Reclamation.
4. From Nursery Managers on the basis of formal work plans for:
  - a. Use in seed and stock production by nurseries.
  - b. Outlying trials or other uses.
  - c. Exchange with cooperating experiment stations; i.e. foundation seed.





## PRODUCTION AND COLLECTION OF PLANTING MATERIALS (Continued)

### SEED AND PLANTING MATERIALS REQUESTS

Requests for seed and other planting materials needed by nurseries, Plant Materials Specialists, and others will be submitted to the Washington-Field Plant Materials Technician by January 15 each year. These will show the estimated needs for the following year.

### PLANS FOR PRODUCTION AND COLLECTION

Nursery Managers will develop yearly production and collection plans. Production plans will be made concurrently with the development of quotas or after quotas are assigned. They will be submitted to the Washington-Field Plant Materials Technician for approval prior to the time of planting. Plans for both seed and stock production will take the form of a rotation schedule showing the anticipated production by accession by years and by field for a rotation period or more. A summary will be included, showing the anticipated production by accession and by season. Collection plans will include a simple list of the accessions to be collected, with remarks as to when, how, and by whom the collections are to be made.

### RECORD OF QUOTAS, REQUESTS, INVENTORIES, ALLOCATIONS, AND SHIPMENTS

Nursery Managers will keep Seed and Stock Encumbrance Registers (see attached Form) by planting years or fiscal years. These will be kept by accession on all materials subject to allocation.

### PLANTING MATERIAL INVENTORIES

Seed and planting stock subject to allocation is classified as property. Acceptable methods of accounting for it is required by Nursery Managers. Seed and Stock Encumbrance Registers (see attached Form) may be used for this purpose. Small lots of seed or planting stock obtained for testing or exchange are not classified as property. They will be referenced in accession records.

### SEED INVENTORIES

Nursery Managers will make a physical inventory of seed on hand as of July 1 each year. This inventory will include only that kind classed as property. It may show such items as species, accession number, year of harvest, source, lot number, purity, latest germination with date of test, and the amount on hand. Only that information needed by the Nursery Manager and the Plant Materials Specialist for making allocation need be given. One copy of the inventory will be sent to the Washington-Field Plant Materials Technician by August 1 each year. Items subject to allocation will be posted from the inventory to appropriate Seed and Stock Encumbrance Registers by Nursery Managers.



## PRODUCTION AND COLLECTION OF PLANTING MATERIALS (Continued)

### SHIPMENT OF PLANTING MATERIALS

The officer to whom seed has been allocated (Area Conservationist, Forest Service, State Game Department, etc.) will be instructed to negotiate directly with the Nursery Manager concerned about the details of delivery and shipment. Upon receipt of instructions from consignees Nursery Managers will ship allocated planting materials by the most satisfactory means. Shipping costs for material for in-Service use are to be charged to the shipping nursery's appropriation unless otherwise arranged. Nursery Managers will post currently to appropriate Seed and Stock Encumbrance Registers all shipments of materials.

### REIMBURSEMENT FOR PLANTING MATERIALS FURNISHED

1. Authority. Specific arrangements must be completed in advance before planting materials can be furnished to other agencies on a reimbursable basis. These arrangements are made by the State Office, and any matters pertaining thereto must be transmitted to the State Office for resolution. Whenever such arrangements are completed, Nursery Managers will be informed.
2. Releasing planting stock on a reimbursement basis. Distribution and Delivery Record, Form SCS-596, is used for releasing stock on a reimbursement basis (see "Distribution Records of Seed and Plants"). Nursery Managers will be responsible for initiating reimbursement for stock furnished. Funds received will, unless otherwise arranged for, be credited to the nursery making the distribution. Whenever a consignment of stock is made on a reimbursement basis, the duplicate, triplicate, and quadruplicate copies of Form SCS-596 will be stamped "For Collection" by means of a stamp provided for this purpose. The Nursery Manager will include information on the yellow, duplicate, copy of Form SCS-596 (or appended to it) so that the State Office may proceed at once with the business of making the collection. (The State Experiment Station will process collections in the case of the Arizona Soil Conservation Nursery.) The information which must be included follows:
  - a. Reference to the authority for releasing the stock. This may be a Memorandum of Understanding, Cooperative Agreement, or some other authoritative document.
  - b. The unit and total cost of each item for which reimbursement is claimed.
  - c. Any instruction applicable, such as the appropriation to be credited.



## OBSERVATIONAL STUDIES

Nursery observational studies serve to make available the best possible plants for soil conservation and to develop improved methods of propagating, establishing, and utilizing selected erosion control plant materials. The work involves the constant search for high quality species and strains, the maintenance of plant testing nurseries, and the conduct of confirmatory tests and method study trials under field conditions. All activities are integrated closely with field practices and handled in collaboration with other Federal and State agencies engaged in related work. It is desirable that the work be covered by an over-all cooperative agreement with the State Agricultural Experiment Station, and where another Federal agency is actively concerned, a three-way agreement should be considered.

### INITIAL STUDIES

Initial observational studies include all preliminary evaluations of adaptation, culture, and use of conservation materials conducted at appropriately located nurseries. The "use group" concept is basic to initial observational testing.

### SUPPLEMENTAL STUDIES

Supplemental observational studies include secondary evaluations on adaptation, culture, and use of materials selected for such testing from the initial observational work referred to above. Supplementary studies may be in cooperation with and located at branch agricultural experiment stations. If located at other places, necessary arrangements will be made to assure management control of the land consistent with the objectives of the trials.

### FACILITATING STUDIES

Facilitating studies are designed to improve techniques, increase efficiency, and reduce the cost of operations as related directly to the production of plant materials. They apply especially to new and promising species but concern as well plants already in general use. This type of study may include tests pertaining to seed collection, propagation, storage, cultural practices, or any other essential activity covering the complete range of plant production.

### SPECIAL STUDIES

Special observational studies provide the basis for projecting activities of a definite research nature which are made possible by the cooperative understandings with Federal and State research agencies. However, such investigations must contribute directly to the soil conservation program, and the research agency concerned with a particular project must assume responsibility for the research phases of the work.





## OBSERVATIONAL STUDIES (Continued)

### PROJECT METHODS AND PROCEDURES

Nursery observational studies will be developed by the project method and procedure. Technical assistance will be given by the Washington-Field Plant Materials Technician and the Plant Materials Specialist in developing projects. Approval and correlation with State and other Federal agencies will be handled by the State Conservationist. The Washington-Field Plant Materials Technician will review new projects with other Washington-Field Plant Technologists.

### ANNUAL WORK PLANS FOR OBSERVATIONAL STUDIES

Annual work plans for each observational project will be completed and submitted in two copies by Nursery Managers to the Washington-Field Plant Materials Technician and to the Plant Materials Specialist for correlation and technical approval prior to any work. One signed copy will be returned to the nursery. A complete planting list is an essential element of these plans.

### REPORTING OBSERVATIONAL STUDIES

Reports of observational work will be developed according to instructions given in the section of "Annual Technical Reports." Development of reports for publication or distribution will be cleared with official cooperators and referred to the Washington-Field Plant Materials Technician for technical approval and to the State Conservationist for clearance.

### INITIAL PLANT MATERIAL INCREASE

Nurseries will increase accessions for secondary testing and for production to meet conservation needs. Species to be increased are the result of screening through the observational phases of nursery work. Nursery Managers will prepare plans for initial plant material production. These plans will be part of the seed production schedule.

## REPORTS

### ANNUAL OPERATIONS REPORTS

1. General. Annual operations reports will be made by Nursery Managers at the close of each fiscal year. Copies will be distributed to the State Conservationist and to the Washington-Field Plant Materials Technician by August 15 of each year. They are for the purpose of summarizing accomplishments and for the accumulation of standard information. The information on plant materials will be consolidated by the Washington-Field Plant Materials Technician and submitted to the Washington, D. C. Office. A copy of the Annual Operations Report is to be provided to the State Soil Conservation Commission, together with a program of work for the succeeding year for the purpose of determining the budgeting needs for the matching funds.





2. Outline. Nursery Managers will prepare annual operations reports according to the following outline as a minimum requirement:
  - a. Introduction. The chronology of the report with respect to previous ones should be included.
  - b. Personnel. List permanent personnel employed during the year showing: position number, name of incumbent, grade, position title, period employed (if less than full-time) and any important changes during the year.
  - c. Labor. Indicate the type of labor used and the total man hours employed during the year.
  - d. Land. Show this information according to the tables attached.
  - e. Funds. Indicate total amount used during the year, showing appropriation or source. Funds obtained by reimbursement are to be included.
  - f. Field-size planting trials. Brief discussions of the program, work plans, and accomplishments may be given. Summarize results for the year on a state basis.
  - g. District seed increase. Brief discussions of the program, work plans, and accomplishments may be given. Summarize results for the year on a state basis.
  - h. Collection, production, and distribution data. Complete the table as attached.
  - i. Noteworthy accomplishments of the year. Prepare a brief narrative--one page or less (single spaced)--on each of the two or three most noteworthy accomplishments of the nursery during the year. These must be written so that they can be used without editing for inclusion with a consolidated report furnished to the Washington, D. C. office.
  - j. Publications. Tabulate the important publications released by the nursery during the year. This will include such things as: technical supplements; USDA leaflets; program aids or other types of publications; technical journal articles; Experiment Station or Extension Service publications; mimeographed or otherwise duplicated material for handouts or releases.



## REPORTS

### ANNUAL TECHNICAL REPORTS

1. General. Annual technical reports will be made by Nursery Managers and their staffs on each organized observational project. An annual weather summary will be included. These reports will cover a crop year. Technicians in charge of each project must determine the closing date of the report year for each project. Each report will contain three sections as follows:
  - a. Text. This will be brief. It is to be written especially for the use of the technician in charge of the project and his immediate superiors. It should include only charts, figures, photographs, and summary tables needed to simplify the narrative. The purpose of the text is to:
    - (1) Record the influence of season, culture, and management upon the results.
    - (2) Provide continuity between present and past work.
    - (3) Record any important changes in methods.
    - (4) Reference tables and charts in the appendix.
    - (5) Give tentative interpretations to results.
    - (6) Indicate the conservation use of results on farms.
    - (7) Guide the future work of the project.
  - The text is to be indexed with a table of contents.
  - b. Appendix. All basic and summary data not needed for an immediate understanding of the text should be placed in the appendix. This material is for the use of the technician in charge of the project and his immediate superiors. It should be processed to facilitate later use in preparing publications and finished reports. The appendix is to be indexed with a table of contents.
  - c. Abstract. This is to be written to inform cooperators and administrators about the work and the progress being made. It should be comprehensive enough to give the reader a general background of the conservation objectives of the work under way and of the results. Tentative interpretations of results showing application will be included.
2. Date due. Annual technical reports of the various projects are due in the offices of the State Conservationist and the Washington-Field Plant Materials Technician by April 1 each year.



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3. Copies required and distribution. Three complete copies of the technical report and four additional copies containing abstracts only will be prepared. Two of the complete copies will be sent to the Washington-Field Plant Materials Technician; the other will be retained as a file copy. Copies with abstracts only will be sent to the Washington-Field Plant Materials Technician, the State Conservationist, and the Director of the cooperating State Experiment Station. The fourth copy will be retained at the nursery as a file copy. The Washington-Field Plant Materials Technician will be responsible for routing one copy of the complete report to Plant Materials Specialist and Nursery Managers and one copy with abstract only to the Washington, D. C. Office.

## PHOTOGRAPHS

General instructions on photographs are furnished by the Cartographic Unit. Special instructions are needed for nursery photographs because of numbering, ordering, and filing. Negatives and legends of all nursery photographs will be filed in the office of the Washington-Field Plant Materials Technician together with a print for ready reference. The following specific instructions apply:

1. Developing photographs. Negatives may be developed locally in the field or by the Cartographic Unit. Use Form R7-12 (one white and one pink copy) in making requests. Clearly state that negatives are not to be numbered and that duplicate copies of proof prints are to be returned with all negatives. It is not necessary to send legends when developing is requested. Nurseries will examine developed negatives critically before assigning numbers and ordering prints. Inferior or duplicate negatives, or those which have no value, should be destroyed without numbering.
2. Numbering negatives. Nurseries will number their own negatives. Photographic negatives are easily damaged. Special care is needed in handling them so as to prevent soiling, finger spotting, scratching, and breakage in transit. Use India ink and a fine pen for numbering. Slight rubbing with a type-writer eraser over the area to be marked will be helpful. Place the number on the "shiny" side of the negative, not on the emulsion side. Films from packs will be numbered on the end and on the same side as that of the factory number. Other negatives should be numbered near the lower right hand corner--not in the image.

Nurseries will have their own numbering series. Photographs taken by Plant Materials Specialists will be included in the proper nursery series. These are identified by prefix letters as follows:

|                             |                               |
|-----------------------------|-------------------------------|
| Aberdeen Nursery            | - Ab                          |
| Pleasanton Nursery          | - Pl                          |
| Pullman Nursery             | - P                           |
| FMS - W. Oreg. and W. Wash. | - Be                          |
| Tucson Nursery              | - To be worked out with WFRMT |





## REPORTS (Continued)

3. Transmitting negatives to the Washington-Field Plant Materials Technician for permanent filing. A photographic envelope will be prepared by the nurseries for each negative. The nursery number will be shown in the upper right hand corner. The complete legend will be typed on the envelope and a copy of the original field legend included with the negative. The negative, envelope, one copy of the proof print, and the copy of the original legend will be transmitted to the Washington-Field Plant Materials Technician for permanent filing.
4. Ordering photographs. Photographs will be ordered on Form R7-12 (one white and two pink copies) according to instructions from the Cartographic Unit. Orders for nursery photographs will be sent to the Washington-Field Plant Materials Technician for routing to the Cartographic Unit. The negatives will be attached to the orders before routing them to the Cartographic Unit. One pink copy of Form R7-12 will be retained by the WFPMT until negatives are returned. Prints will be mailed directly to Nursery Managers by the Cartographic Unit, and the negatives will be returned to the WFPMT for filing.

## DISTRIBUTION RECORDS OF SEED AND PLANTS

1. General information about seed and plant distribution. Seed and plants are either: (a) property, in which case they are subject to accountability similar to that for other types of expendable property, or (b) valuable observational or research materials, in which case they are subject to definite technical considerations and controls. In either case all distribution of plant materials must be accompanied by a properly executed Distribution and Delivery Record, Form SCS-596. These forms are available through the Washington-Field Plant Materials Technician in sets of six multi-colored copies each.
2. Routing of Distribution and Delivery Records
  - a. The original white copy. This is always held by the consignee as his record of materials received.
  - b. Duplicate or yellow copy. This copy, fully executed and signed, must be furnished to the State Conservationist whenever reimbursement is claimed for planting materials distributed. Do not submit this copy to the State Conservationist unless reimbursement is claimed. (See section on "Reimbursement for Planting Materials Furnished.")
  - c. Triplicate or pink copy. This copy will be forwarded to the Washington-Field Plant Materials Technician immediately upon shipment of planting materials. It need not have the signature of the receiving individual. It is used as a technical and administrative document for effective operation of the Plant Materials program.





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- d. Quadruplicate or blue copy. Completed, signed copy to be maintained in the nursery files for reference and inspection.
- e. Other copies. These may be used by the nurseries as needed. Use varies by nurseries due to County and State laws governing the movement of plant materials and the administrative procedures used.

3. Instructions for preparing Distribution and Delivery Records.

- a. Order No. Each nursery maintains its own order number series and controls. A continuous unbroken series is preferred, rather than a new series for any one calendar or fiscal year.
- b. Date. The date called for in the upper right hand corner of the form is the date that the form is made up.
- c. Delivered to. This is self-explanatory. The information given should be complete.
- d. Ordered by and date. Show here the name of the individual requesting the shipment to be made with the date of the request.
- e. Shipped to. This information is to be given completely in case it is different from that shown under "c" above.
- f. Shipped from. This is usually the nursery headquarters unless shipment is made from some other point.
- g. Date shipped. It is very important that the actual date shipment is made be inserted in this space.
- h. Method of shipment. Indicate in the appropriate box or by note the method of shipment.
- i. Accession No. Accession numbers or lot numbers are to be shown only when materials are released for investigational purposes to official cooperators, such as state experiment stations, Forest Service Research, Agricultural Research Service, etc., or for increase purposes such as farmer-district production, nursery increase, foundation seed use, etc. Accession numbers are not to be shown for materials released for regular service plantings, field-size planting trials, operations work of other bureaus or agencies, educational and demonstrational nurseries. Original source information which is available will be shown on packets furnished for investigational purposes but not on Form SCS-596.
- j. Species. Discretion should be used by the Nursery Manager in whether or not the scientific name alone or both the scientific and common name of the material are given.



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- k. How packed. This is mostly self-explanatory. Such statements as "baled," "loose bundles," "flats," "sacked," etc., should be used.
- l. Seed (pounds) and plants (number). These columns are self-explanatory except that weights will be shown in decimal parts of a pound rather than fractions. Where packets are concerned show the word "packet" or "pkt."
- m. Storage facility from which delivered. Unless this applies in any specific case it may be left blank.
- n. Order prepared by. This should include the name of the person (usually a nursery employee) who transmits the delivery instructions to the person who actually fills the order. For instance, an Area Conservationist orders the material to be shipped, based on a formal allocation of it from the State Conservationist (see item "d" above), and the nursery clerk transmits the instructions. In this case the clerk's name would appear.
- o. Filled by. This should include the man's name who is actually in charge of filling the order. For instance, the seed warehouseman or the foreman.
- p. Checked by. Some Nursery Managers delegate the responsibility of checking all orders or assume some of the checking themselves. The name of the individual who checks the order is to be inserted in this space.
- q. Received by. A signature should be obtained with title for every delivery of planting materials. This must be shown on the blue, quadruplicate, copy in all cases, and on the yellow, or duplicate, copy whenever reimbursement is claimed. It is not mandatory that other copies be manually signed as having been received. Occasionally the Nursery Manager will be able to have all copies signed at the time the order is filled, in which case it is recommended. In other cases the truck driver may be asked to signify by signature on a nursery pending copy that the material was received by him. This will not be classed as an authentic signature for the purpose of this form. In the case of deliveries for which reimbursement is claimed it is also necessary to have the date received. It is suggested that "Date received" be added below this item.
- r. Approved by. This caption should always be signed manually for all copies by the Nursery Manager or whomever he delegates to assume the responsibility for approval.



UNITED STATES DEPARTMENT OF AGRICULTURE  
Soil Conservation Service  
Pacific Region

Fall 19            -    Spring 19

Nursery Unit \_\_\_\_\_ Species \_\_\_\_\_

| Quota | Acc. No. | Age Class |
|-------|----------|-----------|
|-------|----------|-----------|

Remarks

[illegible][illegible]



Table \_\_\_\_\_. Number, acreage, and comparative ratings of active field-size planting trials in \_\_\_\_\_.

| Plantings       |        |         | Comparative Rating |      |          |           |
|-----------------|--------|---------|--------------------|------|----------|-----------|
| Year<br>planted | Number | Acreage | Superior           | Same | Inferior | Not Rated |





COLLECTION, PRODUCTION AND DISTRIBUTION DATA FOR THE  
PLEASANTON NURSERY FOR THE FISCAL YEAR 19\_\_\_\_

| USEABLE MATERIAL ONLY UNLESS<br>OTHERWISE INDICATED | PLANTS (No.) |            | SEED (Lbs.) |       |                 |
|---|--------------|------------|-------------|-------|-----------------|
|   | WOODY        | HERBACEOUS | WOODY       | GRASS | LEGUMES & MISC. |

PRODUCTION

Produced in Nurseries  
Collected in Nurseries  
Wildings collected  
Cuttings collected  
Purchased by Nurseries  
Received from Other States  
Received from Other Agencies  
Received from Other Nurseries  
Brought over from Previous Yrs. \_\_\_\_\_

Total available

DISTRIBUTION

Planted by Nurseries  
L. U. Projects  
Districts  
Other S. C. S. States  
Other Federal Agencies  
Non Federal Agencies  
Other Nurseries  
District Seed Production  
Foundation Seed  
Field Size Planting Trials  
Carried Over  
Loss by Grading  
Surveyed \_\_\_\_\_

Total distribution





